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Remarks

Claims 1-19 were pending in the application. Claims 1-9 and 11-19 were rejected. Claim 10 was merely objected to and no claims were allowed. By the foregoing amendment, claim 19 is amended and claims 20-21 are added. No new matter is presented.

Allowable Subject Matter

Applicant appreciates the indication of allowable subject matter in claim 10.

Claim Rejections-35 U.S.C. 112

The examiner rejected claim 19 under 35 U.S.C. 112(2) for an asserted informality. By the foregoing amendment, this has been corrected by correcting dependency.

Claim Rejections-35 U.S.C. 102

Claims 1, 2, 4, 5, 13, 18, and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 4,561,662 of de Villepoix et al. Applicant respectfully traverses this rejection.

Regarding claim 1, the examiner asserted that de Villepoix et al. had "an inner metallic annular member (14) having a generally C-shaped longitudinal radial cross-section." Office action page 2. The examiner did not specifically identify the inner member of de Villepoix et al. as having "longitudinal strength and elasticity effective to maintain the ridges in engagement with the flanges." That element is one of two "envelopes of the joint [that] are characterized by the plastic properties of the materials forming them." Col. 1, lines 46-47. Regarding claim 2, the examiner did, however, assert that de Villepoix et al. "discloses that the inner member provides

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the primary structural integrity of the seal." Office action, page 3. However, the examiner provided no support for this assertion. de Villepoix et al., however, discloses a seal having a helical metal spring 12 which "imparts the elasticity to the joint." Col. 1, lines 29-30 (emphasis added). Regarding claim 4, the examiner asserted de Villepoix et al. as disclosing "that the inner member is formed of a nickel alloy and the outer member is formed of an aluminum material or copper". Office action, page 3. However, claim 4 identifies a nickel-based superalloy, a term of art for which no suggestion is identified in de Villepoix et al. which merely recites elemental nickel.

The examiner made no citations regarding claims 13 and 18. Regarding claim 13, this claim identifies a cross-section consisting essentially of nested "C-shaped" members. As deVillepoix et al. further includes a necessary element of a spring, it clearly does not anticipate claim 13. Thus, the identified inner element (14) of de Villepoix et al. does not serve the claimed role. As noted above, this element is one of two envelopes "characterized by the plastic properties of the materials forming them." Col. 1, lines 46-47 (emphasis added).

Claims 1-3, 5, 13, 18, and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 5,022,663 of Fages et al. Applicant respectfully traverses the rejection.

As with deVillepoix et al., Fages et al. discloses a seal wherein an "elastic core is constituted by a metal helical spring 12 ..." Col. 3, lines 39-40. The Fages et al. variation involves forming "the outer casing 16 ... of a hard metallic material" potentially including the nickel-based superalloy "Inconel". Col. 3, lines 56-59. This presents the same non-infringement arguments regarding claim 1 as does de Villepoix et al. but goes one step further in that Fages et al. clearly identifies its outer member as harder than its intermediate member. It is also contradictory to the

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examiner's assertions regarding claim 2, for which the examiner provided no citation. The examiner has failed to cite any source for the thicknesses alleged in the discussion of claim 3.

Regarding claim 13, the same arguments apply to Fages et al. as do to de Villepoix et al.

Claims 6, 7, 9, and 13 were rejected under 35 U.S.C. 102(b) as being anticipated by French patent no. 610,973 of Barbarou. Applicant respectfully traverses the rejection.

Regarding claim 6, Barbarou clearly shows a seal whose members are open radially inward rather than open radially outward. The same argument applies to claim 13. As to claims 7 and 9, the examiner has not clearly provided support for the assertion. The examiner is reminded of the provisions of MPEP 706.02 which recites, inter alia, that if a "document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts ...". (Emphasis added) The examiner has not provided such a translation thereby depriving Applicant of the opportunity to effectively respond.

Claims 6, 8, 9, 11-13, and 15-17 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent no. 4,218,067 of Halling. Applicant respectfully traverses the rejection.

Regarding claims 6 and 13, the examiner cited elements 12 and 14 as being the inner and outer members. However, FIG. 1 of Halling clearly shows element 12 being open radially outward while element 14 is open radially inward.

Regarding claims 11 and 12, Halling clearly fails to disclose claim 11's roll-forming of ridges and claim 12's plating of the inner member prior to insertion of the second band and flat

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lapping.

Claims Rejections- 35 U.S.C. 103

The examiner rejected claims 4 and 14 under 35 U.S.C 103(a) as being unpatentable over Fages et al. (U.S. Patent No. 5,022,663) in view of Halling (U.S. Patent No. 4,218,067).

Applicant respectfully traverses the rejection.

The examiner asserted a suggestion to combine "in order to have a malleable and resistance [sic] seal." Office action, page 6. This assertive motivation is at best a hindsight reconstruction and is unsupported by any specific citation. Regarding claim 14, the examiner similarly asserted a motivation "in order to give protection to the outer metallic annular member." These rejections are believed further overcome due to the overcoming of the rejections of the underlying base claims.

The examiner rejected claim 7 under 35 U.S.C 103(a) as being unpatentable over Halling (U.S. Patent No. 4,218,067) in view of de Villepoix et al. (U.S. Patent No. 4,561,662). Applicant respectfully traverses the rejection.

The discussion at page 7 of the Office action was particularly confusing and Applicant requests clarification. The examiner asserted that "Halling teaches that the inner member has a full plating of a metal base material." No specific identifications are made of where Halling discloses a plating of the inner member and that such plating is full. The examiner further asserted that de Villepoix et al. "teaches that it is known in the art to have an inner member that has a plating of a cooper [sic] material ...". This is, however, by no means clear and appears to suffer from the misidentification of inner and outer layers. Finally, the examiner asserted that it

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would have been obvious "to have an inner member with a plating of cooper [sic] material, as taught by Villepoix, into a seal as described by Halling, in order to have a malleable and resistance [sic] seal." Again no support for this at best hindsight reconstruction was provided. Furthermore, the combination would not yield the claimed full plating.

The examiner rejected claims 8 and 17 under 35 U.S.C 103(a) as being unpatentable over Barbarou (French Patent No. 610,973) in view of Halling (U.S. Patent No. 4,218,067). Applicant respectfully traverses the rejection.

The examiner asserted that it would have been obvious "to have an inner member with a plating of a cooper [sic] material, as taught by Halling, into a seal as described by Barbarou, in order to have a malleable and resistance [sic] seal." Office action, page 7. Again no citation is provided for this hindsight reconstruction. Applicant reiterates its comments regarding the underlying Barbarou rejection and will comment further, if necessary, when a translation has been provided.

Added claim 20 identifies a seal sealing a pair of opposed flanges. This claim recites that in the sealing condition, the outer member is thickest along the ridges. No such indication is provided in the cited art as the delta-edged projections of various seals would be crushed down to thicknesses substantially less than other portions of the jacket (e.g., 90° away from the projections). Dependent claim 21 further identifies the absence of a coil spring energizing member.

Accordingly, Applicant submits that claims 1-21 are in condition for allowance. Please charge any fees or deficiency or credit any overpayment to our Deposit Account 02-0184.

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Respectfully submitted,

By



William B. Slate

Attorney for Applicant

Reg. No.: 37,238

Telephone: 203-777-6628

Telefax: 203-865-0297

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